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Advances in Chromatography, Vol. 22, J.C. Giddings, E. Grushka, J. Cazes and P.R. Brown, eds., 1983, 1186
Advances in Chromatography, Vol. 23, J.C. Giddings, E. Grushka, J. Cazes and P.R. Brown, eds., 1984, 1544
Basic Food Chemistry, 2nd edition, Frank A. Lee, ed., 1983, 1544
Biology of Vitamin E, CIBA Foundation Symposium, 101, R. Porter and J. Whelan, eds., 1983, 1188
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Fibre in Human and Animal Nutrition, The Royal Society of New Zealand, Bulletin 20, G. Wallace and L. Bell, eds., 1983, 736
Foam Flotation: Theory and Applications, Chemical Industries, Vol. 11, by Ann N. Clarke and David J. Wilson, 1983, 609
Food Additives: Recent Developments, J.C. Johnson, ed., 1983, 80
Food Oils and Their Uses, 2nd Edition, by T.J. Weiss, 1983, 79
Food Texture and Viscosity: Concepts and Measurement, by Malcolm C. Bourne, 1982, 736

HPLC Analysis of Biological Compounds. A Laboratory Guide, Chromatographic Science Series, Vol. 26, by William S. Hancock and James T. Sparrow, 1984, 1440
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The Maillard Reaction in Foods and Nutrition, G.R. Waller and M.S. Feather, eds., 1983, 1548
Mutagenicity Testing and Related Analytical Techniques, R.W. Frei and U.A.Th. Brinkman, eds., 1981, 1546
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